

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

DMS 1908

Gr. 4

Penetrant

LIQUID SYSTEMS

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME MAGNAFLUX CORPORATION		EMERGENCY TELEPHONE NO. (312) 867-8000
ADDRESS (Number, Street, City, State, and ZIP Code) 7300 West Lawrence Avenue, Chicago, Illinois 60656		
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS ZL-54 Zyglon Penetrant	
CHEMICAL FAMILY	FORMULA	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
Heavy Aliphatic (Petroleum) Naphtha				25	200 ppm
Tributyl Phosphate				4	5 ppm
Carbitol Acetate				4	None Assigned

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	4700F IBP	SPECIFIC GRAVITY (H ₂ O=1)	0.94
VAPOR PRESSURE (mm Hg.)	< ½ mm at 1000F	PERCENT VOLATILE BY VOLUME (%)	20%
VAPOR DENSITY (AIR=1)	Unknown	EVAPORATION RATE (_____ = 1)	N/A
SOLUBILITY IN WATER	Emulsifiable but Insoluble		
APPEARANCE AND ODOR	Viscous green liquid, oily smell.		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	1930F PM Closed Cup	FLAMMABLE LIMITS	Lower	Upper
EXTINGUISHING MEDIA	CO ₂ , Foam	None		
SPECIAL FIRE FIGHTING PROCEDURES	None			
UNUSUAL FIRE AND EXPLOSION HAZARDS	None			

SECTION V - HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	
EFFECTS OF OVEREXPOSURE	Unknown
Dizziness, drowsiness, nausea. Irritating to skin. Moderately irritating to eyes.	
EMERGENCY AND FIRST AID PROCEDURES	
Remove to fresh air. Wash off skin promptly with soap and water. If in eyes, rinse copiously with water.	

SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid)		May dissolve or soften rubber, plastics and organic coatings	
HAZARDOUS DECOMPOSITION PRODUCTS		None	
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
Soak up with absorbent compounds and sweep up. Can be flushed away with water spray.	
No smoking.	
WASTE DISPOSAL METHOD	
Material is combustible, can be burned, or else treat as oily waste. Not a hazardous waste.	

SECTION VIII - SPECIAL PROTECTION INFORMATION		
RESPIRATORY PROTECTION (Specify type) None		
VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General)	OTHER
PROTECTIVE GLOVES Neoprene gloves if exposure is unavoidable		EYE PROTECTION None
OTHER PROTECTIVE EQUIPMENT None		

SECTION IX - SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
Store in dry place, away from heat sources.	
OTHER PRECAUTIONS ZL-54 exerts drying action on skin, leading to irritation. Wipe off promptly.	
Remove saturated clothing.	